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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/758,399	01/15/2004	Michael T. Roberts	51605/CM/P723	6080

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EXAMINER
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BOCHNA, DAVID

ART UNIT	PAPER NUMBER
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3679

DATE MAILED: 11/17/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)	
	10/758,399	ROBERTS ET AL.	
	Examiner	Art Unit	
	David E. Bochna	3679	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 31 August 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-58 is/are pending in the application.
- 4a) Of the above claim(s) 5,9-14,26,38,45,54 and 56-58 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 40-44 and 46 is/are allowed.
- 6) ☒ Claim(s) 1-4,6-8,15,20-22,27-32,37,39 and 47-55 is/are rejected.
- 7) ☒ Claim(s) 16-19,23-25 and 33-36 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                  | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Election/Restrictions*

1. Claims 5, 9-10, 26, 38, 45, 54 and 56-58 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected species, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 8/31/06.
2. Claims 11-14 depend from claim 10, which is directed to a non-elected invention. Therefore, claims 11-14 have been withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

### *Claim Rejections - 35 USC § 102*

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-2, 6, 8, 15, 20-21, 28-31, 37, 47, 51 and 53 are rejected under 35 U.S.C. 102(b) as being anticipated by White.

In regard to claim 1, White discloses a tube connector system comprising:

a first sleeve 13 having a first inside surface;

a second sleeve 10 coupled to first sleeve, the second sleeve having a second inside surface that opposes the first inside surface;

a split ring 15 located axially between the first and second inside surfaces, the split ring comprising a first end and a second end wherein a gap is defined between the two ends, and

wherein an outer surface portion at the first end is tapered defining an outer ramp and wherein an inner surface portion at the second end is tapered defining an inner ramp; and

a tube 11 surrounded by the ring, wherein when the first sleeve and the second sleeve are brought together, the first and second inside surfaces exert a force radially compressing the split ring causing the inner ramp to ride over the outer ramp.

In regard to claim 2, the first inside surface is sloped, and wherein the second inside surface is sloped in a direction opposite the first inside surface.

In regard to claim 6, the inner surface portion 20 of the split ring at the first end is tapered toward the outer surface portion decreasing a thickness of the ring in a direction toward the gap.

In regard to claim 8, the inner ramp 20 comprises two portions angled relative to each other and wherein the outer ramp comprises two portions angled relative to each other and wherein when the split ring is radially compressed the two inner ramp portions ride onto the two outer ramp portions.

In regard to claim 15, wherein the split ring comprises a body 15, a leg 20 extending from a first end of the body and a second leg extending from a second end of the body opposite the body first end, wherein the split ring first end with the outer ramp is formed on the first end of the body, and wherein the split ring second end with inner ramp is formed on a free end of the second leg, and wherein a second gap is defined between the first leg and the second end of the body, wherein the two gaps are staggered relative to each other.

In regard to claim 20, a groove (space where 15 is located in fig. 2) is formed on an inner surface of one of the first and second sleeves and wherein the split ring is seated within the groove.

In regard to claim 21, further comprising a resilient fitting 21 surrounding the tube, wherein the split ring surrounds the resilient fitting, wherein when radially compressed, the split ring clamps on the resilient fitting.

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In regard to claim 28, White discloses a tube connector system comprising:

a first sleeve 13 having a first inside surface;

a second sleeve 10 coupled to the first sleeve, the second sleeve having a second inside surface that opposes the first inside surface;

a first tube 11;

a second tube 11;

a resilient fitting 16 surrounding the first and second tubes; and

a split ring 15 surrounding the resilient fitting and located radially inside of the first and second sleeves, and axially between the first and second inside surfaces, wherein when the first sleeve and second sleeve are brought together, the first and second inside surfaces exert a force radially compressing the split ring, and the split ring radially compresses the resilient fitting over at least one of said first and second tubes.

In regard to claim 29, the first inside surface is sloped, and wherein the second inside surface is sloped in a direction opposite the first inside surface.

In regard to claim 30, wherein the split ring comprises an outer surface comprising tapered opposed outer surfaces whereby the split ring has a generally trapezoidal cross-section, and wherein the first sloped inside surface provides a force against a first tapered opposed outer surface and wherein the second sloped inside surface provides a force against the other of said opposed outer surfaces.

In regard to claim 31, the split ring 15 comprises an outer surface comprising tapered opposed outer surfaces whereby the split ring has a generally trapezoidal cross-section.

In regard to claim 37, the split ring comprises two ends 16, wherein an inner surface portion of the split ring at each end is tapered toward the outer surface of the split ring.

In regard to claim 47, White discloses a tube connector system comprising:

a first sleeve 10 having a first inside surface;

a second sleeve 13 coupled to the first sleeve, the second sleeve having a second inside surface that opposes the first inside surface;

a groove (space for 15) formed on the second sleeve

a split ring 15 seated in the groove and located axially between the first and second inside surfaces; and

a tube 11 surrounded by the split ring,

wherein when the first sleeve and second sleeve are brought together, the first and second inside surfaces exert a force radially compressing the split ring, and the split clamps on the tube.

In regard to claim 51, the first sleeve is a male sleeve 10 and wherein the second sleeve 13 is a female sleeve, wherein the first sleeve 10 is received within the second sleeve 13.

In regard to claim 53, the split ring comprises two ends 20, wherein an inner surface portion of the split ring at each end is tapered toward the outer surface of the split ring.

5. Claims 1-4, 7 and 47-52 are rejected under 35 U.S.C. 102(b) as being anticipated by Rice.

In regard to claim 1, Rice discloses a tube connector system comprising:

a first sleeve K having a first inside surface;

a second sleeve A coupled to first sleeve, the second sleeve having a second inside surface that opposes the first inside surface;

a split ring G located axially between the first and second inside surfaces, the split ring comprising a first end and a second j end wherein a gap is defined between the two ends, and

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wherein an outer surface portion at the first end is tapered h defining an outer ramp and wherein an inner surface I portion at the second end is tapered defining an inner ramp; and

a tube C surrounded by the ring, wherein when the first sleeve and the second sleeve are brought together, the first and second inside surfaces exert a force radially compressing the split ring causing the inner ramp to ride over the outer ramp.

In regard to claim 2, the first inside surface b is sloped, and wherein the second inside surface is sloped in a direction opposite the first inside surface.

In regard to claim 3, wherein the split ring G comprises an outer surface comprising tapered opposed outer surfaces whereby the split ring has a generally trapezoidal cross-section, and wherein the first sloped inside surface provides a force against a first tapered opposed outer surface and wherein the second sloped inside surface provides a force against the other of said opposed outer surfaces.

In regard to claim 4, wherein the split ring comprises an outer surface comprising tapered opposed outer surfaces whereby the split ring has a generally trapezoidal cross-section.

In regard to claim 7, the split ring comprises a width wherein the width decreases at the second end in a direction toward the gap (j is narrower than G).

In regard to claim 47, Rice discloses a tube connector system comprising:

a first sleeve K having a first inside surface;

a second sleeve A coupled to the first sleeve, the second sleeve having a second inside surface that opposes the first inside surface;

a groove g formed on the second sleeve

a split ring G seated in the groove and located axially between the first and second inside surfaces; and

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a tube C surrounded by the split ring,

wherein when the first sleeve and second sleeve are brought together, the first and second inside surfaces exert a force radially compressing the split ring, and the split clamps on the tube.

In regard to claim 48, wherein the first inside surface b is sloped, and wherein the second inside surface g is sloped in a direction opposite the first inside surface.

In regard to claim 49, wherein the split ring G comprises an outer surface comprising tapered opposed outer surfaces whereby the split ring has a generally trapezoidal cross-section, and wherein the first sloped inside surface provides a force against a first tapered opposed outer surface and wherein the second sloped inside surface provides a force against the other of said opposed outer surfaces.

In regard to claim 50, wherein the split ring G comprises an outer surface comprising tapered opposed outer surfaces h, I whereby the split ring has a generally trapezoidal cross-section.

In regard to claim 51, wherein the first sleeve A is a male sleeve and wherein the second sleeve K is a female sleeve, wherein the first sleeve is received within the second sleeve.

In regard to claim 52, wherein the first sleeve A is threaded to the second sleeve K.

### ***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.



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7. Claims 22 and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over White.

White discloses a resilient fitting, but not the exact material of the fitting. However, it would have been obvious to one of ordinary skill in the art to make the fitting out of silicone because the selection of a known material based upon its suitability for the intended use is a design consideration within the skill of the art. In re Leshin, 227 F.2d 197, 125 USPQ 416 (CCPA 1960).

8. Claims 27, 39 and 55 are rejected under 35 U.S.C. 103(a) as being unpatentable over White in view of Brubaker.

White discloses a system as described above with flats for accommodating a wrench for tightening the system. However, White does not disclose the use of grooves to facilitate connection of the coupling system. Brubaker teaches the use of grooves (spaces between 23) to tighten a coupling system. Therefore it would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify the connection means of White to include grooves, as taught by Brubaker, as the use of grooves as a tightening means is common and well known in the art, as demonstrated by Brubaker.

***Allowable Subject Matter***

9. Claims 40-44 and 46 are allowed.
10. Claims 16-19, 23-25, 33-36 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

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*Conclusion*

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Schmitt, Boughton, Budnick et al., Eckleberry, Raybould, Raybould '653 and Muehlberg all disclose similar couplings common in the art.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to David E. Bochna whose telephone number is (571) 272-7078. The examiner can normally be reached on 8-5:30 Monday-Thursday and every other Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Daniel P. Stodola can be reached on (571) 272-7087. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

  
David E. Bochna  
Primary Examiner  
Art Unit 3679